

## **REMARKS / ARGUMENTS**

### **I. General Remarks**

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of this application.

Applicants hereby request continued examination of this application, in accordance with 37 C.F.R. § 1.114. Applicants respectfully request that the amendments presented herein be entered, and further request consideration of the claims in light of the remarks contained herein. The remarks and arguments submitted in the previously-filed Amendment and Response to Advisory Action, Mailed March 20, 2007 (response filed on April 23, 2007) (hereinafter “the April 23, 2007 Response”) are incorporated by reference into this Response. A copy of the April 23, 2007 Response is included with this filing for the Examiner’s convenience.

### **II. Disposition of Claims**

Claims 15-23, 28-30, 47-50, and 55-67 are pending in this application. Claims 1-14, 32-46, and 69-81 were cancelled in a previous response. Claims 24-27, 31, 51-54, and 68 have been withdrawn. Claim 19 has been cancelled herein.

In the Final Office Action mailed on December 29, 2006 (“the Final Office Action”), claims 15-22, 29, 30, 47-49, 56-64, 66, and 67 were rejected under 35 U.S.C. § 102(b), and claims 15, 23, 28, 47, 50, 55, and 65 were rejected under 35 U.S.C. § 103(a).

Claims 15, 22, 29, 30, 47, 49, 66, and 67 have been amended herein. These amendments are supported by the specification as filed. In the April 27, 2007 Advisory Action, the Examiner indicated that the amendments to the claims in the April 23, 2007 Response were not entered because the amendments presented therein were deemed to raise new issues that would require further consideration or search, and were not deemed to place the application in better form for appeal. (*See* April 27, 2007 Advisory Action at ¶ 3.) Therefore, Applicants have listed and amended the claims in this Response as they were pending prior to the filing of that amendment.

### **III. Remarks Regarding Examiner’s Objections to the Amendments to the Claims**

In the April 27, 2007 Advisory Action, the Examiner refused to enter the amendments as presented in the April 23, 2007 Response on the grounds that the amendments to

the claims require further search or consideration. (See April 27, 2007 Advisory Action at ¶ 3.)

The Examiner further noted that:

The proposed amendment to independent claim 15 limits the bridging agent to be a degradable material. Dependent claim 17 recites contacting the filter cake with a degrading agent “such that the bridging agent is dissolved thereby.” However, claim 19, which depends from claim 17, recites “the bridging agent compris[ing] the degrading agent.” This raises 35 U.S.C. 112, second paragraph, indefiniteness issues because it is unclear as to how a bridging agent “that is a degradable material” can also be a degrading agent that dissolves said bridging agent.

(*Id.* at “NOTE”.) Although Applicants believe that the language in the claims as originally-presented was sufficiently definite to claim the present invention, Applicants have cancelled claim 19 herein, and thus believe that any purported indefiniteness issue raised by this claim is now moot.

Therefore, Applicants respectfully request that the Examiner now enter Applicants’ proposed amendments to the claims and consider the remarks presented in their April 23, 2007 Response, as presented in this RCE and Response.

#### **IV. Remarks Regarding Rejections of Claims**

##### **A. Rejections of Claims Under § 102(b)**

Claims 15-22, 29, 30, 47-49, 56-64, 66, and 67 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,387,986 to Moradi-Araghi *et al.* (“*Moradi-Araghi*”). With respect to these rejections, the Final Office Action states:

Applicant’s arguments regarding Moradi-Araghi not disclosing “a bridging agent comprising a degradable material” are incorrect. As discussed previously in item 18 of OA, Moradi-Araghi discloses a drilling fluid comprising a mixture of calcium carbonate and a degradable polymer. As stated previously on page 7 of OA:

“Moradi discloses a gel-forming composition comprising a material encapsulated with a degradable first polymer ... and a weighting agent such as calcium carbonate ... *which can also act as a bridging agent* ... (see column 3, line 66 to column 4, line 27) ... [wherein] the degradable first polymer may be a polyorthoester (see column 3, lines 12-16) ... [that] can be used during drilling .... The capsules of the first polymer may be fairly small (see Example 1 and column 4) so [it] can act as a bridging agent. [Emphasis added]

Moradi-Araghi is thereby disclosing a gel-forming composition for drilling comprising, *inter alia*, calcium carbonate (a conventional bridging agent additive used to form a “bridge” along pores or fractures as shown previously in item 18 of OA) and a degradable polyorthoester polymer.

Applicants in the instant specification disclose that in preferred embodiments the bridging agent is a blend of bridging agent/degradable materials, such as calcium carbonate and poly(lactic)acid (paragraph [0032]), and that the degradable material can be of any preferred size and shape, such as shavings, flakes, strips, spheroids, pellets and tablets (paragraph [0035]). Therefore, the drilling fluid disclosed in the instant specification encompasses a composition containing calcium carbonate as a bridging agent and a degradable polymer as an encapsulant.

Moreover, independent claims 15 and 47 recite the drilling fluid comprising the bridging agent comprising a degradable material. Therefore, in view of the specification (particularly, paragraph [0032]), a composition comprising calcium carbonate and degradable material would anticipate the bridging agent limitation because the composition would contain a mixture of calcium carbonate and degradable material.

In addition, in Example 1 (the sole sample of the composition provided in instant specification), the disclosed composition contains aqueous sodium chloride, a liquid xanthan biopolymer, a starch derivative, powdered polylactic acid and calcium carbonate. Because the powdered polylactic acid is the degradable polymer component, whereas the calcium carbonate must be the bridging agent, the phrase “bridging agent comprising a degradable material”, used throughout the specification and claims, must encompass the situation wherein the bridging material and the degradable polymer are simply mixed together in the composition.

Applicant’s arguments regarding the polylactic acid of the composition in Example 1 being both the degradable material and the bridging agent (and not calcium carbonate present in the composition) is confusing and misguided. The composition of Example 1, comprises a mixture of calcium carbonate (a well-known bridging agent) and a polylactic acid (an example of a degradable polymer, see instant claim 22), which is in accordance with the preferred embodiment for the bridging agent disclosed in paragraph [0032] of the specification. *It is extremely unclear as to whether Applicant is arguing that a mixture of calcium carbonate and polylactic acid (or polyorthoester as in Moradi-Araghi) is not a “bridging agent comprising a degradable material” (which*

*would contradict the previously cited section of the specification, paragraph [0032]); and/or whether Applicant is arguing that the bridging agent and the degradable material must be the same. If the latter, the recitation in claims 15 and 47 should instead recite, e.g., "wherein said bridging agent is polylactic acid, etc."*

Consequently, Moradi-Araghi's gel-forming drilling composition comprising, *inter alia*, a degradable polyorthoester polymer and bridging material (calcium carbonate) anticipates the instant claims.

(Final Office Action at pages 4-6 (emphasis added).)

In their Amendment and Response to the Final Office Action (filed February 26, 2007), Applicants amended independent claims 15 and 47 to require that the bridging agent comprise a degradable material bridging agent. In response to this amendment, the March 20, 2007 Advisory Action stated:

The amendment to independent claims 15 and 47, which rewrites the phrase "bridging agent comprising a degradable material" to "degradable material bridging agent", does not materially reduce the issues in prosecution. This is because the newly amended phrase ("degradable material bridging agent") can be interpreted to encompass an embodiment wherein the bridging agent "comprises" a degradable material as was the case previously.

(March 20, 2007 Advisory Action at Continuation of 3.) In order to form a basis for a rejection under 35 U.S.C. § 102(b), a prior art reference must disclose each and every element as set forth in the claim. MANUAL OF PATENT EXAMINING PROCEDURE (hereinafter "MPEP") § 2131 (2006). In this response, Applicants have amended independent claims 15 and 47 to recite that the bridging agent is a degradable material, in accordance with the Examiner's suggestion in portion of the Final Office Action quoted above. Applicants respectfully submit that *Moradi-Araghi* does not disclose the use of a bridging agent that is a degradable material, as recited in amended claims 15 and 47, nor does it disclose the steps of forming a self-degrading filter cake that comprises the bridging agent that is a degradable material, and allowing that filter cake to degrade, as recited in amended claim 15. Applicants hereby incorporate into this response all of their remarks in Section V.A. of their response to the non-final office action (response mailed on September 29, 2006) explaining why *Moradi-Araghi* fails to disclose these elements.

Therefore, because *Moradi-Araghi* does not disclose these elements recited in claims 15 and 47, as amended herein, *Moradi-Araghi* cannot anticipate these claims, and claims

15 and 47 are allowable over *Moradi-Araghi*. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 16-18, 20-22, 29, 30, 48, 49, 56-64, 66, and 67 depend, either directly or indirectly, from independent claim 15 or 47, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

**B. Rejections of Claims Under § 103(a)**

**1. Rejections of Claims 15-22, 29, 30, 47-49, 56-64, 66, and 67 Over *Moradi-Araghi***

The Final Office Action notes that Applicants’ arguments regarding the 35 U.S.C. § 103 component of the 35 U.S.C. § 102/103 rejection of claims 15-22, 29, 30, 47-49, 56-64, 66, and 67 as obvious over *Moradi-Araghi* have been found persuasive, and the § 103 component of those rejections has been withdrawn. (Final Office Action at pages 2 & 6.) Applicants thank the Examiner for this acknowledgement.

**2. Rejections of Claims 15, 23, 47, 50 and 65 Over *Moradi-Araghi***

Claims 15, 23, 47, 50 and 65 stand rejected under § 103(a) as being unpatentable over *Moradi-Araghi*. With respect to these rejections, the Final Office Action states:

Applicant’s arguments regarding the 35 U.S.C. 103 rejection of claims 15, 23, 47, 50 and 65 as unpatentable over *Moradi-Araghi* have been fully considered but they are not persuasive.

Examiner’s previous discussion in paragraph #11 of Applicant’s arguments concerning *Moradi-Araghi* apply equally to the instant rejection and are incorporated herein.

Applicant’s arguments regarding the lack of rationale for the “modification” of *Moradi-Araghi* to include a plasticizer or fluid loss agent are inaccurate. As stated previously in item 7 of OA, *Moradi-Araghi* is drawn to drilling fluid compositions, as are the instant claims. It is common in the art to add (modify) a drilling fluid by adding a plasticizer or fluid loss reducing agent to provide a more efficient method of drilling.

Regarding the “structural differences” between *Moradi-Araghi* and the drilling fluid encompassed by the instant claims, a recitation of an intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed composition (and its process of use) from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Because

Moradi-Araghi and the instant claims contain the same blend of bridging agent and degradable material, then said blend in both Moradi-Araghi and the instant claims must function in the same manner in their respective drilling fluids.

Thus, this 103 rejection over Moradi-Araghi is maintained.

(Final Office Action at page 7-8.)

In order to form a basis for a rejection under 35 U.S.C. § 103(a), a prior art reference must teach or suggest each and every element as set forth in the claim. MPEP § 2143.03. As stated in the Final Office Action quoted above, these § 103(a) rejections depend in part on the Examiner's assertion that *Moradi-Araghi* teaches "the same blend of bridging agent and degradable material" that Applicants' claims recite. However, as discussed in Section IV.A. above, *Moradi-Araghi* does not teach or suggest a bridging agent that is a degradable material, as recited in claims 15 and 47, as amended herein, nor does it teach or suggest the steps of forming a filter cake that comprises the bridging agent that is a degradable material, and allowing that filter cake to degrade, as recited in claim 15, as amended herein.

Therefore, because *Moradi-Araghi* does not teach or suggest all elements of claims 15 and 47, as amended herein, Applicants respectfully assert that *Moradi-Araghi* cannot obviate these claims, and claims 15 and 47 are allowable over *Moradi-Araghi*. Moreover, since "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers," and since claims 23, 50, and 65 depend, either directly or indirectly, from independent claim 15 or 47, these dependent claims are allowable for at least the same reasons. *See* 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

### **3. Rejections of Claims 28 and 55 Over *Moradi-Araghi* in View of *Dobson, Himes, or Cowan***

Claims 28 and 55 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Moradi-Araghi* in view of U.S. Patent No. 5,728,652 to Dobson *et al.* ("Dobson"), U.S. Patent No. 5,191,931 to Himes *et al.* ("Himes"), or U.S. Patent No. 4,531,594 to Cowan ("Cowan"). With respect to these rejections, the Final Office Action states:

Moradi-Araghi was discussed above in paragraph #12 and all the arguments therein are incorporated herein.

Applicant's statement that "if the degradable polymer is optimized to act as a bridging agent ... with the particle sizes in the range recited in claims 28 and 55, it will not be permitted to degrade to

release an encapsulated crosslinking agent into the fluid while in the subterranean formation" is extremely vague and confusing. Furthermore, the claims recite the degradable material having the particle size distribution in the fluid. A degradable material will, of course, degrade in solution upon release from its encapsulation. Thus, one skilled in the art would have been motivated by the teachings of Dobson, Himes or Cowan to optimize the particle size of any drilling fluid component, including the encapsulated degradable material in *Moradi-Araghi*, to have preferred, resultant particle size in the fluid that will provide, e.g. enhanced fluid loss prevention.

Thus, the instant claims are unpatentable over *Moradi-Araghi* and either Dobson, Himes or Cowan.

(Final Office Action at page 8.)

In order to form a basis for a rejection under 35 U.S.C. § 103(a), a prior art reference must teach or suggest each and every element as set forth in the claim. MPEP § 2143.03. As stated in the emphasized portion of the Final Office Action quoted in Section IV.B.2. above, and as incorporated into the Examiner's arguments regarding the rejections over *Moradi-Araghi* in view of *Dobson, Himes*, or *Cowan*, these § 103(a) rejections depend in part on the Examiner's assertion that *Moradi-Araghi* teaches "the same blend of bridging agent and degradable material" that Applicants' claims recite. However, as discussed in Section IV.A. above, *Moradi-Araghi* does not teach or suggest a bridging agent that is a degradable material, as recited in claims 15 and 47, as amended herein, nor does it teach or suggest the steps of forming a filter cake that comprises the bridging agent that is a degradable material, and allowing that filter cake to degrade, as recited in claim 15, as amended herein. Nor does *Dobson, Himes*, or *Cowan* supply those missing elements.

Therefore, the combinations of *Moradi-Araghi* and *Dobson, Himes*, or *Cowan* do not teach or suggest all elements of claims 15 and 47, as amended herein. Claims 28 and 55 each depend, either directly or indirectly, from claims 15 and 47, respectively, and thus incorporate all of the elements in claims 15 and 47 that the cited prior art references do not teach. *See* 35 U.S.C. § 112 ¶ 4 (2004). Thus, Applicants respectfully assert that claims 28 and 55 similarly are patentable over those combinations of references, and respectfully request the withdrawal of these rejections.

**V. No Waiver**

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what the prior art of record discloses and/or what would be obvious to a person of ordinary skill in the art. The example distinctions discussed by Applicants are sufficient to overcome the anticipation and obviousness rejections.

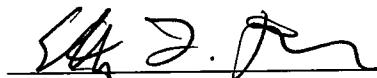
**SUMMARY AND PETITION FOR A ONE-MONTH EXTENSION OF TIME  
TO FILE THIS RCE**

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

The Advisory Action states that the time period for filing this reply expires four months from the mailing date of the Final Office Action (mailed December 29, 2006). Applicants hereby petition under the provisions of 37 C.F.R. § 1.136(a) for a one-month extension of time to file this Response, extending the period for reply from April 29, 2007 to May 29, 2007.

The Commissioner is hereby authorized to debit Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0187, in the amount of \$910.00 for (1) the RCE fee of \$790.00 under 37 C.F.R. § 1.17(e) and (2) the fee of \$120.00 for a one-month extension of time to file this RCE under 37 C.F.R. § 1.17(a)(1). Should the Commissioner deem that any additional fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a petition therefor, and direct that any additional fees be charged to Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0187.

Respectfully submitted,



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